NEW ENGLAND FARMER.

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ORIGINAL PAPERS.

FOR THE NEW ENGLAND FARMER.

ON THE MANUFACTURE OF CIDER.

The quality of cider depends on several contingencies, among which I will enumerate,

1. The species of fruit employed;
2. Soil and aspect of the orchard;
3. Condition of the fruit when ground;
4. The process of grinding, &c.;
5. Management of the vinous fermentation; and,
6. The precautions which are taken to prevent the aceteus fermentation.

I intend to offer remarks upon each of these divisions. And,

1. *The Fruit.* Apples differ not only in their flavor, colour, and time of ripening, but in the proportions of their constituent parts. The most material of these constituent parts are acid, sugar, astringency, vegetable extract and water. The properties of good dessert and cider apples are seldom found united, though they are not incompatible with each other. Table apples are esteemed on account of their bland and aromatic flavor, crisp and juicy pulp, and for the property of keeping long, or ripening late. The characteristics of a good cider apple are, a red skin; yellow and often tough and fibrous pulp, astringency, dryness, and ripeness at the cider making season. "When the rind and pulp are green, the cider will always be thin, weak and colourless; and when these are deeply tinged with yellow, it will, however manufactured, or in whatever soil it may have grown, almost always possess colour, with either strength or richness."—*(Knight).* The apple, like the grape, must attain a state of perfection, or perfect maturity, before its juices develope all their excellence; and as many of our best eating apples do not acquire this maturity until winter or spring, this affords a satisfactory reason why winter fruit is seldom or never good cider fruit. In a dry apple, the essential elements of cider are generally more concentrated, or are accompanied with a less proportion of water, than in a juicy one; of course the liquor of the former, is stronger than that of the latter. Of our best cider apples, ten or twelve bushels of fruit are required for a barrel of juice; while of the ordinary juicy kinds, eight bushels generally suffice.

The only artificial criterion employed to ascertain the quality of an apple for cider, is the specific gravity of its *must* or unfermented juice;—or its weight compared with that of water. This, says Knight, indicates, with very considerable accuracy, the strength of the future cider. Its weight and consequent value, is supposed to be increased in the ratio of the increase of the saccharine matter. In making wine of domestic fruit, say of the currant or gooseberry for example, we use sugar till the unfermented liquor attains a certain specific gravity; or until the saccharine matter of the fruit, and that artificially supplied, bears a certain proportion to the water. This ensures to the liquor, strength, or body, as the sugar is converted into spirit by the fermentive process.

Very little has been done to acquire a correct knowledge of the relative value of our native apples for cider. Coxe has described and figured one hundred varieties of this fruit, of which about thirty are recommended for cider. Of these thirty kinds I selected the following for my nursery, as not only being best for cider, but as generally combining the desirable qualities of table fruit also: viz. the Hagloe and Virginia crabs, Harrison, Campfield, Styre, yellow Newton and Newark pippins, Priestley, Graniwinkle, Winesap, Carthouse and Cooper's russeting. We have undoubtedly, among our indigenous fruit, many kinds of excellent cider apples hitherto unnoticed; and it is very desirable that their properties should be tested, and the result of the investigation made public.

In Great Britain more attention has been given to this subject. The specific gravity of the juice of old cider varieties has not only been ascertained by scientific men, and their relative value fixed, but new varieties have been obtained by artificial crossing, surpassing, in richness of juice, any before cultivated. Loudon has given a table of 38 cider apples, in his Encyclopedia of Agriculture. Of these, the following are only known to be in our nurseries, viz; *Redstreak, Wine, Styre, Hagloe crab, *Maiden's Blush, *Count Pendu, *Downton and Grange pippins, Foxley, Siberian Harvey, yellow Siberian and *Minshell's crab. Those with an asterisk are also excellent dessert apples. The seven last named, five of which are new varieties by Knight, I have obtained from Europe, and propagated in nursery. None of the old English cider varieties exceed, in the specific gravity of their juice. 1,079, water being 1,000. Six of Knight's new varieties are over 1,079, and one is 1,091. Knight is of opinion, that with proper varieties of fruit, the defects of almost every soil and aspect might be corrected, and that fine ciders might be made in any part of England. In France and Italy, small berried grapes of a harsh flavour, are preferred for wine-making, *(Loudon)* and it will be found that the cider apples recommended by Loudon and Coxe are under a medium size, and several of them austere and harsh.

2. *Soil and aspect.* The apple, like the grape, is known to take much of its character from the soil on which it grows. The best cider orchards in England, are on a stratum of red marle which stretches across the island. The soil of Herefordshire highly reputed for its ciders, is an argillaceous, or clay marle. And Knight says, the strongest and most highly flavoured cider which has been obtained from the apple, was produced from fruit growing on a shallow loam, on limestone basis. All the writers upon the subject seem to agree, that calcareous earth should form a component part of the soil of a cider orchard. It appears to have the effect of mitigating the harshness of rough and austere fruits, and of neutralizing the juices of those which are too acid. Coxe says, the soil which grows good wheat and clover, is best for a cider orchard. My own observation would induce me also to prefer a dry and somewhat loose soil, in which the roots, destined to furnish food for the tree and fruit, may penetrate freely, and range extensively, in search of nutriment. The juices of plants and fruits are always more concentrated when growing on a dry than on a wet soil. Mint, or other aromatic herbs, is much stronger in the specific virtues of the plant, when grown on a dry soil, and greater in volume, when grown on a wet one. The maple yields the sweetest sap, though less in quantity, on a dry soil. Apples may grow large on a moist alluvion; but the fruit will neither be so abundant, nor so rich, as on a dry soil. The thriftiest trees produce the most wood buds; those less thrifty the most fruit buds. The best aspect for an orchard is one somewhat elevated or undulating, protected from prevailing cold winds—and facing the south, south-east or east. Ciders brought to the Albany market, from the hilly towns of Columbia and Saratoga, on the transition formation, possess the most spirit, best flavor, and resist longest the acetous fermentation.

3. *Condition of the fruit.* Fruit should be used when it has attained its perfect state of maturity, and before it begins to decay, because it then yields the greatest proportion of saccharine matter. The most certain indication of ripeness, says Crocker is the fragrance of the smell and the spontaneous dropping from the trees. Each kind of the apple should be manufactured separately, or those kinds only mixed which ripen at one time and which experience shall show, are not prejudicial to each other. Who would ever think of making a superior wine from an indiscriminate mixture of a dozen kinds of grapes? And yet we seem to expect good cider from an indiscriminate mixture of a dozen kinds of apples. It may be urged, that the evil is irremediable, because our orchards, containing these dozen varieties, have been furnished to our hands; and that neither the quantity nor quality of any one kind of fruit renders it an object to manufacture it separately. Is it not time, then, to set about correcting the evil, by selecting only the best kinds for new plantations. A farmer should make cider to sell and it is material to him whether he obtains two or ten dollars the barrel. Our manufactories, our towns and cities, and the demand for exportation, will always ensure a market and price for good ciders. Mr Wynkoop, of Lancaster, Pa. has 400 trees, of the Virginia crab, on less than five acres of ground; and when his orchard was twenty-two years old, he stated to the President of the Pennsylvania Agricultural Society, that it produced him every other year forty hogsheads of cider, of 112 galls. each; which he sold at Philadelphia at 2s. 6d. the gallon, or about $1500 in the gross.—And yet this apple is not a first rate cider apple. It is deficient in sugar, but abounds in astringency, rather a keeping than an enriching quality.—What farmer can apply his land to better profit? Wines differ as much in their quality and price as ciders. Fruit, soil and skill make the difference in both; and upon the proper selection and expense of those depend the quality of the liquor, and the consequent profits of the cultivator. Upon this branch of the subject I will only add, that the apples should ripen upon the tree, be gathered when dry, in a cleanly manner, spread in an airy, covered situation if practicable, for a time, to induce an evaporation of aqueous matter, which will increase the strength and flavour of the liquor, and be separated from rotton fruit and every kind of filth before they are ground.

4. *Grinding, &c.* The apples should be reduced, by the mill, as nearly as possible to a uniform mass, in which the rind and seeds are scarcely discoverable; and the pomace should be exposed to the air from twelve to twenty four hours, according to the temperature, before it is pressed.—The juices of the rind of fruit, as may be instanced in the orange and lemon, are highly concentrated; and those of the rind of the apple have a material influence, with the aromatic bitter of the seeds, upon the flavor and strength of the liquor.

On partially macerating the pulp of an apple, and subjecting it to immediate pressure, the juice which escapes will be found to be thin, nearly colourless and devoid of flavor. If the maceration is perfect, so as to crush the seeds and break down the rind, the strength, color and flavor of the must will be improved: and if the macerated pulp is exposed for a few hours to the atmosphere, and then subjected to pressure, these desirable properties in the liquor will be found to be still farther augmented. "By the chemical action of the roller," says Knight, "the various fluids which occupy the different vessels and cells of the fruit, are mingled with the juices of the rinds and seeds, and with the macerated substance of the vessels and cells themselves. In such a mixture it seems probable that new elective attractions will be exerted, and compounds formed, which did not exist previously to the fruit being placed under the roller; and hence the most correct analysis of the expressed juices will convey but a very imperfect degree of knowledge of the component parts of the different fluids, as they existed in their state of separation, within the fruit. I have often extracted," he continues, "by means of a small hand press, the juice of a single apple, without having previously bruised it to pieces; and I have always found the juice thus obtained to be pale and thin and extremely defective in richness, though the apple possessed great merit as a cider fruit. I have then returned the expressed juice to the pulp which I have exposed, during a few hours, to the air and light; and the juice has then become deeply tinged and very rich. In the former state it apparently contained but a very small portion of sugar; in the latter it certainly contained a great quantity; much of which I believe to have been generated subsequently to the juice having been subjected to the action of the press; though it may be difficult to explain satisfactorily the means by which it could have been produced. Knight ascertained, by a subsequent experiment, that by exposing the reduced pulp to the operation of the atmosphere, for a few hours, the specific gravity of the juice increased from 1,064 to 1,073; and from the experiment being repeated in a closed vessel with atmospheric air, he ascertained the accession to be oxygen, which according to Lavoisier, constitutes 64 per cent of sugar. For fine cider, he recommends, that the fruit be ground and pressed imperfectly, and that the pulp be then exposed twenty-four hours to the air, being spread, and once or twice turned, to facilitate the absorption of oxygen; that it be then ground again and the expressed juice be added to it before repressing. In straining the must too much care cannot be taken to exclude the pulp, as its presence is apt to render the fermentation too violent, and drive it into the acetous stage. A hair sieve, filled partly with straw, answers the purpose well.—The mill which most effectually reduces the pulp is to be preferred. It has been remarked with much force, that cider mills should, like school houses be limited to one in a district In this way it would be an object with the owner to render his implements complete, and to conduct the process with care and skill. And as the value of the cider depends so much upon its being well made, it is believed the owners of fruit, as well as the purchasers of the cider, would be benefitted by such an arrangement.

5. *Vinous fermentation.* This is commonly called *working*. It commences at the temperature of 59° Fah. and cannot be conducted in safety when the heat is over 75° for a high temperature induces a too rapid fermentation, by which much of the spirit passes off with the disengaged carbonic acid gas, and the acetous or vinegar fermentation begins at 77°. This will show the importance of conducting the vinous fermentation under a proper temperature, which is from 50 to 70° of Fah.—To show the chemical effect of the vinous fermentation, it will be proper to repeat that the unfermented juice, or *must*, of the apple, consists of saccharine matter or sugar, vegetable mucilage or extract: astringency or tannin; malic, and a small matter of gallic acid, the principle of flavor, tinging or coloring matter, and water. The sugar becomes the basis, or spirit, of the fermented liquor; the spirit, after vinous fermentation, and the tannin, or astringent matter, preserve it from the acetous fermentation, if the vegetable mucilage, or yeast, is separated when it has performed its office. This vegetable mucilage acts upon the saccharine matter in a manner analogous to yeast upon the wort of the brewer—it causes fermentation, and converts sugar into spirits—by its giving off carbonic acid gas, and imbibing hydrogen; the liquor becomes clear, and part of the mucilage rises to the surface with the disengaged air, in the form of froth, and the residue is precipitated, with the heavier impurities, to the bottom, in the form of sediment or lees. This is the critical period.—The liquor may now be drawn off clear. If left longer, the feculent matter, or froth, by parting with the gas which renders it buoyant, soon settles and mixes with the liquor, renders it turbid, and as soon as the temperature attains a proper height, causes a new fermentation. This will explain the reason why ciders become harsh and sour on the approach of warm weather in the spring. The elementary principles of sugar, ardent spirits and vinegar, it has been ascertained by the experiments of Lavoisier, are the same; and these substances only differ in the proportion of their component parts, and in the modes of their chemical union. Sugar consists of hydrogen, oxygen and carbon. An increased proportion of hydrogen enters into the composition of ardent spirits, and of oxygen into vinegar. The same agent, vegetable mucilage, which converts the sugar of the apple into spirits, will convert the spirits into vinegar, under a proper temperature, and aided by the oxygen of the atmosphere. The process of making vinegar is greatly accelerated by exposing cider or wine to the atmosphere, the oxygen of which it imbibes, and which is termed by chemists the great acidifying principle. Here again we see the propriety of professional cider manufacturers, who might be provided with cellars where the temperature could be regulated, and who would carefully rack off the liquor at the completion of the vinous fermentation.

The vinous fermentation commences and terminates at different periods, according to the condition and quality of the fruit, and the state of the weather. The juice of unripe fruit, if the weather be warm, will begin to ferment in a few hours after it passes from the press; and seldom stops at the vinous stage. The juice of ripe fruit, when the temperature is lower does not begin to ferment under a week or fortnight, or longer, often continues slowly through the winter, and when made from some of the finer cider apples, is not completed under six or nine months. Indeed, in some cases the liquor does not become clear under a year, and the sugar is not wholly decomposed under two years: For the whole of the sugar is seldom decomposed during the first sensible fermentation.—Knight considers cider at two years old as in the best state for bottling. For until the sugar is decomposed, fermentation insensibly goes on, and the strength of the liquor increases. The like insensible process goes on in wines, and when it is completed, the wines are said to be ripe, and are in their highest state of perfection. *(See M'Culloch.)* Temperature being the same I think it may be assumed as a rule, that fermentation will be rapid and short, in an inverse ratio to the proportion which the saccharine matter bears to the mucilage and water; and that the vinous liquor will be rich, high flavored and durable, in proportion as the sugar and astringency preponderate in the must.

6. *Precautions to prevent acetous fermentation.*—These are, supposing the previous contingencies to have been favourable, a careful separation of the vinous liquor from the froth and lees,—a cool temperature,—racking and fining,—and artificial means to destroy the fermenting quality of the remaining mucilage.

I have already suggested the importance of drawing off the liquor from the scum and sediment—at the termination of the vinous fermentation This period may be known by the cracking of the froth in an open cask, or, if in a close one, by the application of the nose or ear to the bung hole. If the fermentation has not ceased, a hissing will be apparent, and the gas given off will give a pungent sensation to the nose. If the liquor is not sufficiently clear, or indications appear of the acetous fermentation having commenced, the cider should be racked into clean strong casks, and fined with isinglass, eggs, or skimmed milk. This operation may be repeated if found necessary; but it should be performed in clear cold weather. After the first racking, the casks should be kept bunged close, and further rackings be avoided if possible, as every racking reduces its strength, and much of the spirit escapes with the carbonic acid gas which is evolved in the fermentive process. The oxygen of the atmosphere, besides, increases the vinegar fermentation. But if these methods fail, resort may be had to the means of impeding the natural operation of the mucilage, or vegetable leaven. This may be done by what is called *stumming*, that is burning a rag impregnated with sulphur, in the cask in which the liquor is to be decanted, after it has been partly filled, and rolling it so as to incorporate the liquid with the gas; or by putting a drachm or two of sulphite of potash into each cask, which will precipitate and render insoluble the remaining leaven. If the fruit is good, and properly ground, and the cider racked from the fermenting casks at a proper time, most or all of the subsequent operations will be superseded.

I fear, Mr Editor, I have been too prolix upon a subject which almost every farmer professes to understand; yet considering it, as I do, of great importance to the community at large, I cannot

close this without suggesting to the consideration of the enlightened Trustees of your state Agricultural Society, the propriety of ascertaining, by experiment and analysis, the comparative value of our cider fruit, and of awarding premiums, not only for the discovery of the best kinds of cider apples, but for indigenous or hardy grapes, best adapted for American wines.

Albany, Feb. 26, 1827. J. BUEL.

[TRANSLATED FROM THE FRENCH.]

ON PLOUGHING IN GREEN CROPS FOR MANURE.

Mr Fessenden, The use of green crops for manure is known to enlightened agriculturists, but I have rarely seen them thus used in this country. Many farms, situated in the interior, and of consequence deprived of the means of easily procuring manure, oftentimes leave without culture, lands which it would cost but little expense to put in a state to yield an excellent crop the following year. This should be the use of buckwheat, sown for the first time immediately after the spring frosts. When in flower, plough it in for the first process. Then sow a second time, which crop, when in flower, should also be ploughed in, which will give another process. If the season should not be too far advanced, sow a third time, sow thick (about three bushels of grain to the acre at each sowing,) in order to obtain more verdure, and cause the crop to grow the taller. The year following you will have the choice of such crop as will be most advantageous to your interest. And, after having obtained a knowledge of the soil, you may restore by this means, lands which are the most exhausted; and you could not bring the crop to a better market. These trials may be made on a small scale, for example on one acre; and they would establish the advantage which cultivators might obtain from this vegetable employed in this manner. Farmers in general are acquainted with the value of clover, ploughed in to fertilize the earth. But the use of buck-wheat, on lands nearly exhausted is a thing which deserves the particular care of the cultivator in this country, in which as yet, but little seems to be known or practised relating to this subject.

I have seen with pleasure, in a late number of your paper, the encouragement, which the Massachusetts Agricultural Society have offered to cultivators. They have a noble employment to whom is entrusted the distribution of such rewards, which have a tendency to promote the different branches of agriculture and rural economy as well as that manufacturing industry, which employs their products. I am, with regard,

ANDRE PARMENTIER.

Horticultural Garden, Long Island, Feb. 10, 1827.

Remarks by the Editor.—The ploughing in of green crops, for the purpose of manuring the soil is a practice by no means new in this country.—The Rev. Dr. Eliot, of Killingworth, Con. in Essays on Field Husbandry, published 1760 takes notice of this mode of recruiting worn out lands; and recommends millet as a suitable crop for this purpose. The Massachusetts and the Essex Agricultural Societies offer premiums for experiments on this subject. Col. Pickering called the attention of agriculturists to this practice in an Address delivered to the Massachusetts Agricultural Society, in 1822, and published in the New England Farmer, vol. i. page 218. S. W. Pomeroy, Esq. published an "*Essay on the Advantage of Manuring with Green Crops*" which first appeared in the Massachusetts Agricultural Repository for June 1822, and was republished in the New England Farmer, vol. i. page 9. Mr Pomeroy recommends the trial of the White Lupine, as a "green dressing for the restoration of worn out soils." Dean's New England Farmer, likewise treats of this mode of enriching land. Under the head "Green Dressing" page 177, Wells & Lilly's Ed. it is observed "In Britain, buck wheat is much used, as the stalks, when green are very large and juicy, and as they require but a short time to rot It is asserted, that about ten days are sufficient for it to lie under the furrows.

The chief difficulty I can think of, which tends to discourage this practice, is, the choking of the plough in going among a tall growth of plants. It may be needful for a boy to tend it. But in Britain, to prevent choking, they recommend to pass a roller over the crop to be turned in, which lays it flat, and in the same direction that the plough is to pass.

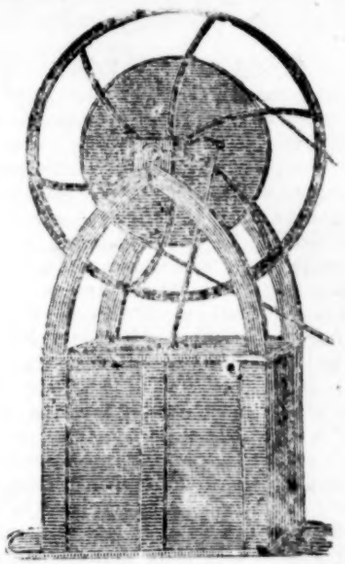
Banister's Husbandry, an English work, says "This grain is sometimes sown for the purpose of ploughing in the stalks as a manure On fallows this method may be pursued to advantage; but then it is to be noted, that the ground should be in pretty good heart, so as to throw up a large burthen of haulm, otherwise no benefit can accrue from this mode of husbandry." Very few writers on husbandry, either in America or Europe have omitted to recommend the ploughing in of buck wheat, as a manure, but we do not recollect any directions except those of Mr Parmentier for ploughing in for manure two or three crops of buck wheat in the course of the same season.

ORNAMENTAL GROUNDS.

Mr. Fessenden,—I think if those who have estates in your vicinity would employ Mr Parmentier to lay out their grounds in case they occupy them, they have an immediate reward, and if they sell them, they would receive for every dollar thus invested, ten. The advantages Mr P. has had are within reach of few in this country, and a man who has natural taste, and whose fortune enables him to gratify it, generally attains great perfection.—Mr P. when possessed of fortune (which the revolutions in France deprived him of) followed for amusement what he now, in addition to his Horticultural Establishment, follows for the support of his family; and as his charges are extremely low, I hope he will receive that patronage in your state which he so richly deserves, and which has been rendered him here.—I this day saw a map of 12 acres he has been laying out for Alderman King of this city, and think it is the happiest thing he has executed. The corporation here contemplate improving the Park, &c. If so he will be engaged to design and execute the improvements contemplated.—When you see a gentleman, particularly at his time of life, exerting himself for a respectable support, with cheerfulness, and treating all with the politeness that always attend those of his country, it is our duty to employ him, particularly as our interest (which we all look to more or less) will be essentially benefited by the operation. Yours &c.

IMPROVEMENT.

New-York, Feb. 8, 1827.



WING'S IMPROVED STEAM ENGINE.

The above is a drawing of Wing's Improvement in the Steam Engine, without a boiler; one of a two horse power, is about the size of a large kitchen stove; takes no more fuel than a common fire place, its Machinery is very simple, and easy to be kept in repair, and less expensive than any hitherto in use.

Any further information of the above can be obtained, by applying to W. P. Wing, *Post Master*, Greenwich Village.

Brighton Market, Monday, March 5.—Number of beeves, including 22 unsold last week, 375; 2 fine oxen, sold at $6, average price from $4 50 to $5 50, 48 unsold; 405 sheep, some good, brought $4 50 to 5 per head, average price $2.75; milch cows and calves, none; pigs none; working cattle, few in the market, no sales.

Distressing Accident.—As Mr Earl, a respectable inhabitant of Baltimore, was preparing a few days ago, for a shooting excursion, he took a fowling piece which had been loaned to a person, and returned, as he supposed, unloaded. He put a small charge of powder into the piece, and fired, when unhappily, a full charge of shot, which without his knowledge was in it, was lodged in the body of the son of Mr H. W. Tilyard, a child about three years old, who was just entering the room, hand in hand, with the son of E. The child died immediately, and on examination, it was found that ten shots had entered the heart of the innocent sufferer.

Newspapers were first printed in England in 1663. The London Gazette was published on Saturdays, and so continues to the present day.

American Venison. Such is the regularity and speed of the packets from the U. States arriving at this port, says the Liverpool Mercury, that American venison is now no unusual dish at the tables of many of our townsmen.

Needles—Now so much used, were manufactured in England about 1550, by a Negro from Spain; he would not impart the art, but Elias Growse, a German, some years after, taught the English the art. [Russell's England.]

TO THE EDITOR OF THE NEW ENGLAND FARMER.

THE PLANE, OR BUTTONWOOD.

Mr Fessenden—There are few operations in husbandry that appear of more importance, and yet more neglected, than *plantations of forest trees*; and it is gratifying to observe, that the exertions of Mr Lowell for a number of years past to excite attention to the subject, are so ably seconded by those of Gen. H. A. S. Dearborn. The ardour manifested by this gentleman in his letter to Mr Tyng on the culture of the *Plane*, and in other valuable communications published in your useful paper, is highly laudable; and we are encouraged to hope that a similar spirit will be more generally diffused. But it is not difficult to account for the tardiness of our countrymen in adopting improvements of a permanent character; such as appropriating a portion of their farms to plantations of forest trees, and constructing their buildings with more lasting materials. Although it might be demonstrated that such a system would enhance the value of their estates more than any other they could pursue.

I believe it will be admitted as a sound axiom that in any country, the exercise of the *plough*, the *spade* and *hoe*, the *hatchet* or *hammer*, must be *sweetened* by the prospect of reward *not far distant*, or few will be found to take hold. *The feelings of present ill, for such is toil, must be overbalanced by the hope of grasping future good*; and with a people whose *habits* and *institutions* are opposed to all systems of *entail* or *primogeniture*, it is very obvious that no small degree of *patriotism*, if not *enthusiasm*, will be requisite to induce them to extend their views to the *perspective* reward for planting acorns. Perhaps there is no branch of *internal improvement*, where *direct* and *liberal legislative* encouragement would be attended with more salutary effects, in proportion to the means required, than for the promotion of plantations of forest trees for timber and fuel, upon the *denuded* territory of the Commonwealth; and for the construction of buildings of more permanent materials than *wood*, especially in those sections where such of an excellent quality abound, and, in numerous instances, encumber the ground near *sites* destined for *public edifices* and *mansions* to be called *elegant*, that will become of little more value to posterity than *painted bird boxes with green blinds*.

The *Plane* or *Buttonwood* may, undoubtedly, be propagated with more ease than any other tree of the forest; and the speedy returns of fuel it will make to the planter, afford encouragement that the cultivation would become extensive, were its value duly appreciated. From an impression that it is not, I am induced to state a few facts supported by experience. I found great numbers of the *Plane* upon my estate upwards of thirty years ago,—many have since been produced *spontaneously*, and I have used considerable quantities for fuel during the last twenty years.

Those who have attended to the subject must be aware of the great difference in the *quality* of wood of the same species or variety, depending on the *soil*, as well as the *season* when felled; hence may arise various opinions as to its value for fuel. And it is not improbable that a prejudice exists against Buttonwood, from attempts to burn it when *green*; for in that state, if produced on deep moist soils, strong clay loams, and river flats or interval, it is with difficulty ignited, and affords little heat. But I have observed such as had grown on *dry sandy* or *rocky soils* to burn as free, when green, as *oak* cut at the same time. Judicious men who have attended to the *economy* of fuel, speak confidently of a vast saving by felling all kinds of wood when the *sap* is *down*, and keeping it from the weather till dry; none will be more benefitted by such management than Buttonwood, and we shall consider it as so treated in the following remarks.

It is not pretended that Buttonwood emits so strong a *heat* or is so *lasting* as *oak*, but I think it superior to *Chesnut*—affording a more pleasant fire, and making much better *coals*—and that it is a very valuable fuel for *stoves*. Perhaps it may be ranked with the best kind of *soft maple*. But in estimating the relative value of various species of trees to plant for fuel, it is evident we cannot arrive at correct conclusions by a simple comparison of the *combustion* of one with another. It seems necessary to inquire, what species on a given portion of land of the same fertility, can be made productive in a given time, and at least expense, of the greatest quantity of *caloric* or *matter* of *heat*? The fact however must be assumed at present, and from attentive observation on the growth and combustion of Buttonwood during the period above mentioned, I do not hesitate to declare my perfect conviction, that it will furnish results much more favorable than any tree our country produces—except the *Locust* on *dry soils*, should its destructive enemy the *Borer* be extirpated.

I have lately been enabled to compare the growth of the *sprouts* of Buttonwood with those of white and black oak, hickory and chesnut, in the same wood-lot—a *swell* of dry rocky land—the whole of which I cut off ten years before, and it appears that the Buttonwood will afford more than double the *bulk* of fuel than the three first mentioned, and considerably exceed the Chesnut. Its sprouts are now fit to cut and will make the *second crop* of fuel from the same *stools* in twenty years.

It is supposed that the depredations of *cattle* in woodlands during the last *century*, prevented the growth of as much wood and timber, in some sections of the country, as was consumed in fuel.—The young shoots of the Plane seem obnoxious to cattle; as I have never observed any of them cropped in *pastures*, where they have grown; nor could I ever perceive that the *herbage* under them was not as well *relished* by the cattle as that under any other species.

It is said that the *portable cooking furnaces* lately introduced, have caused an increased demand for *charcoal* in Boston and vicinity of more than 20 per cent. And when the economy and convenience attending their use becomes more generally known, it is not improbable but that the demand for that article will be much more increasing.—We may therefore reasonably infer, that the period is not far distant when the practice must commence of planting, what is called in England, *coppice wood*, that is, such as will grow of sufficient size and make good *charcoal* if but cut off once in about ten years. We have no information of the *quality* of charcoal made of Buttonwood, but from the appearance of the coals produced in an open fire place, I am of the opinion that it will prove superior to *chesnut* and several other species now used for the purpose, and which are of slower growth. Should it be a fact, Buttonwood will occupy a prominent station in the system;—as a boy may collect in a single day, a sufficient quantity of the *seeds* to plant some thousands of acres,—and it will *thrive* on a greater variety of soils, perhaps, than any other species that grow in our forests,—although it affects strong moist loams and flats or bottoms on the margin of rivers; where its growth is surprisingly rapid.

Buttonwood is known in the Western States by the name of *Sycamore*, and may be correctly called the *Mammoth* of the forest. I must confess that I felt somewhat incredulous of its enormous size, as represented by the early settlers of Ohio, and by *Michaux*, but *occular* demonstration has lately confirmed the correctness of their statements.

I well recollect observing, in my youth, on the *alluvial meadows* of Connecticut River, fine ranges of *live fences* consisting entirely of *Buttonwood*, planted four or five feet apart, and, when at a proper age, *lopped*, or, as it is termed in England, *splashed*, which rendered them impervious to cattle; and the sprouts afforded a crop of *fuel* once in eight or ten years. If planted around fields ten feet apart on a strong or moist soil, they will in a short time grow of sufficient size to allow of being morticed for the admission of *rails*, and become *perennial posts*. But where such fences are not required it may be good management to plant them near stone walls enclosing pastures and other fields. They appear to be very suitable to fill up vacancies in *wood-lots* and other unproductive spaces, that it will not be difficult to find on almost every farm.

Whether it will be found the most profitable system upon a large scale, to form entire plantations of Buttonwood, or to mix it with other species, experience only can decide.

I remain, dear sir,

Respectfully yours,

S. W. POMEROY.

Brighton, March 5, 1827.

FRUIT TREES.

Mr Editor,—If you think proper, I wish you to publish the following: I think a sure remedy for the failure of all kinds of fruits, as apples, cherries, pears, plumbs, apricots and peaches. Any person wishing to cultivate any or the whole of the above, may be sure of doing it if they will attend to the following directions.

First, the object is, to keep the ground well frozen until late in the spring, and to effect this, clear the ground of snow several feet from the trunk of the tree, and where the ground is well frozen, the harder and deeper the better, and when the snow is well softened either by rain or sun, bank it up round the trunk of the tree, say three feet high, and the same in width at bottom, like a small hay cock, beat it down hard with your shovel, and then cover it well with swingle tow, if to be had, if not, with fine straw from the stable, or chip manure.—The snow thus thrown up will soon become solid ice, and if well covered, will continue until May, when the spring frosts are gone. It has been generally thought that the killing of tender fruit trees is effected by the severity of the cold in winter, but that is a mistake—all the mischief arises from the frost in the spring; peaches and apricots vegetate very early, and when the sap rises it loosens the bark, and then a frost, as far as it will freeze through a limb or twig, so far it will kill it—but keep the ground frozen until late and not the least killing of limbs or twigs will be seen on any of your trees. It has also been said and believed, that on Connecticut River we could not raise peaches and apricots, for the winter would kill

them; but follow the above directions and I pledge myself you will not be disappointed. I know for a certainty that peach trees in any good land on the Connecticut will produce larger, fairer, and better flavored fruit than any hill lands. The most eligible place for fruit trees is on the north side of a stone wall—for in common seasons little care need be used to keep the ground well frozen until late in the spring, the sun in that situation will have its full influence to ripen and sweeten the fruit. [Franklin Post.]

CAMELS' HAIR.

We obtain from a French paper the following facts concerning the manufacture of Camels' Hair.

It is not obtained by shearing, like sheep's wool, but is shed spontaneously by the animal every year, in the month of April, in large mats, after having protected it from the cold during the winter season. The Tartars who accompany the caravans collect them with care, load the animals with their own cast off apparel. The young camels yield the finest hair; and in its best state it is finer than the most beautiful Angola. The article is obtained from Africa, a great part of Asia, and above all from India. In Persia it is made into the finest carpets. It is supposed that the English spin it wet and deprived of oil. It is stated, that a single manufacturer in France has used a large quantity of camels' hair for several years; and the texture of his cloth makes it probable that he practices the mode adopted in England. Those who have tried to manufacture it without extracting the oil, have not succeeded in spinning fine threads.

At Rouen it has been successfully mixed with cotton, and stuffs made of it are much softer than the ordinary mixtures of cotton and wool.

Some exertions are making in France to improve and extend this branch of Manufacture.

[N. Y. D. Adv.]

CURE FOR THE TOOTH-ACHE.

At a recent meeting of the London Medical Society, Dr Blake stated that the extraction or excision of teeth was unnecessary. He was enabled, he said, to cure the most desperate cases of tooth ache, unless the disease was connected with rheumatism, by the application of the following remedy to the diseased tooth:—"Alum, reduced to an impalpable powder, two drachms; nitrous spirit of æther, seven drachms; mix and apply them to the tooth." Mr Fay, the American Dentist, who was present, admitted, with much candor that in 95 cases out of 100, where surgeons and dentists are applied to for the purpose of extraction, relief might be obtained without that, or even excision. It may, therefore, be worth while to try the remedy prescribed by Dr. Blake, as unlike many of the nostrums of the present day, it cannot do any harm, but it does not appear to possess the character of a specific.

TO MECHANICS.

The goodness of saws, chisels, and other edge-tools, depends upon the quality of the steel, which should be uniform throughout, and it is always better to have them tempered rather too hard than too soft, for use will reduce the temper. If, at any time, you wish to restore the temper and to perform the operation yourself, the best method is to melt a sufficient quantity of lead to immerse the cutting part of the tool. Having previously brightened its surface, then plunge it into the melted lead for a few minutes, till it gets sufficiently hot to melt a candle, with which rub its surface; then plunge it in again and keep it there until the steel assumes a straw colour, (but be careful not to let it turn blue); when that is the case take it out, rub it again with the tallow, and let it cool; if it should be too soft, wipe the grease off and repeat the process without the tallow, and when sufficiently hot, plunge it into cold spring water, or water and vinegar mixed.

By a proper attention to these directions, and a little practice, every workman will have it in his power to give a proper temper to the tools he may use.

If a saw is too hard, it may be tempered by the same means; if you are near a plumber's shop you may repeat the process conveniently and without expense, when they are melting a pot of lead.

In other cutting tools you must wait till the steel just begins to turn blue, which is a temper that will give it more elasticity, and, at the same time sufficient hardness.

From the Salem Observer.

LEHIGH COAL.

My room is 18 feet long, 15 wide, and 7½ high. I have burnt the Lehigh coal in this room in a cylindrical sheet iron stove, lined with pipe clay, and made in Philadelphia for this purpose. My room has been as warm as I desired; I have not measured the heat by a Thermometer, but my friends have always found it comfortable and have often complained of its heat. One ton of Lehigh coal has furnished my fire for eighty days, beginning with the 24th of November last, with the addition of a small quantity of charcoal for kindling. For eight weeks of the time the fire has been kept burning all night.

Cost of coal delivered, - -	$8 50
Breaking and housing, - -	50
Charcoal, say 2 baskets, - -	60
	$9 60

Which for eighty days is 12 cents per day; that is a great part of the time twenty-four hours.—The coal has been used with the utmost freedom, and the time above named has included the coldest weather. So much charcoal is not required, where the fire is not suffered to go out. I can make a fire of Lehigh coal, using charcoal for kindling, sooner than of wood; and in point of general convenience, it is in my view far superior to wood.—Of its comparative cheapness, I leave it to others to judge from the above premises.

Yours, respectfully,

New Slate Quarry.—The Providence (R.I.) Journal mentions that a quarry of Slate Stone, such as is used for covering roofs of buildings has been lately discovered near the coal mine on Rhode Island. The quantity is inexhaustible, and can be got from the quarry at a small expense, and of any size less than 3 or 4 feet square. It is said to be very tough, and the plates are about a quarter of an inch in thickness. As the quarry is situated very conveniently for water transportation, its discovery may be expected to have some effect on the price of an article of great importance.

In 1825 $30,000 worth of cider was exported from the town of Orange, N.J. B. B. Cooper, Esq. has upwards of 10,000 apple trees.

NEW ENGLAND FARMER.

BOSTON, FRIDAY, MARCH 9, 1827.

EFFECTS OF CLIMATE ON ANIMALS.

To compensate the variations of the seasons a variety of changes take place in the circumstances of animals. The clothing of animals living in cold countries, is not only different from that of the animals of warm regions in its quantity, but in its arrangement. If we examine the covering of swine of warm countries, we find it consisting of bristles or hair of the same form and texture; while the same animals which live in colder districts, possess not only common bristles or strong hair, but a fine frizzly wool next the skin, over which the long hairs project. Between the swine of the South of England, and Scottish Highlands, such differences may be observed. Similar appearances present themselves among the sheep of warm and cold countries. The fleece of those of England consists entirely of wool; while the sheep of Zetland and Iceland possess a fleece, containing, besides wool, a number of long hairs, which give to it, when on the back of the animal the appearance of being very coarse. By this arrangement, in reference to the quantity of clothing, individuals of the same species can maintain life comfortably in climates which differ considerably in their average annual temperature.

FASHION IN FOOD.

The animals which are eagerly sought after as articles of food by one tribe, are neglected and despised by another. Thus the seals and porpoises, which, a few centuries ago, were eaten in Britain and were presented at the feasts of kings are now rejected by the poorest of the people.

MANAGING AND FEEDING ANIMALS.

Food for animals, though it must be supplied in abundance, ought not to be given to satiety. Intervals of resting and exercise must be allowed according to circumstances. Even animals grazing on a rich pasture have been found to thrive faster when removed from it once a day, and either folded or put in an inferior pasture for two or three hours. Stall fed cattle, and pen fed swine will have their flesh improved in flavour by being turned out into a yard or field once a day; and many find that they feed better, and produce better flavoured meat when kept loose under warm sheds, or hammels, one or two in a division, a practice now general in Berwickshire, Eng. Coarser food may be first given to feeding animals; and as they acquire flesh, that which is of more solid and substantial quality. In general it may be observed, that if the digestive powers of the animal are in a sound state, the more food he eats the sooner will the desired result be obtained; a very moderate quantity beyond sufficiency constitutes abundance; but by withholding this additional quantity, an animal, especially if young, may go on eating for several years, without ever attaining to fatness. Properly treated, a well fed ox, of moderate size, will feed on a rich pasture in from four to six months, and in stalls or covered pens, with green or steamed food in a shorter period.

In young growing animals, the powers of digestion are so great, that they require less food than such as are of mature age; for the same reason also they require more exercise. If rich food is supplied in liberal quantities, and exercise withheld, diseases are generated, the first of which

may be excessive fatness; growth is impeded by very rich food, for experience shows that the coarsest fed animals have uniformly the largest bones. Common sense will suggest the propriety of preparing a medium course between very rich and very poor nutriment.

Mastication and Cooking.—Unless food be thoroughly deprived of its vegetative powers before it enters the stomach, the whole nourishment which it is capable of affording cannot be derived from it In the case of the leaves and stalks of vegetables, this is in general effected by mastication; but it requires some care to accomplish it in the case of grains. Hence the advantage of mixing corn given to horses or cattle with chaff or cut straw; and hence it is supposed by some the intention of nature, in the instinct which fowls have to swallow small stones is directed to the same object. But the most effectual mode of destroying the living principle, is by the application of heat; and if vegetable food of every kind could be steamed or boiled before it was given to animals (at least in winter, and for fattening to slaughter, or feeding for edible products) it is rendered probable by analogy and experiment, that much more nourishment would be derived from it.

Salt, it appears from various experiments, may be advantageously given to most animals, in very small quantities; it acts as a whet to the appetite, promotes the secretion of bile, and, in general, is favourable to health and activity. In this way only can it be considered as preventing or curing diseases; unless perhaps in the case of worms, to which all saline and bitter substances are said to be injurious.

That degree of heat which has by habit, and the breeding from successive generations in a cold climate, become natural to animals, is necessary to their well being: and a somewhat increased degree in the cold months, or diminished degree in such as are oppressively warm, is advantageous in the fattening process. Where a sufficient degree of warmth to promote the ordinary circulation of the blood is not produced by the natural climate, or by exercise, it must be supplied by an artificial climate. Horses and sheds are the obvious resources, both for this purpose, and for protection from the *extremes of weather*. Cold rains and northerly winds are highly injurious by depriving the external surface of the body of caloric more rapidly than it can be supplied from within by respiration, and the action of the stomach; and also by contracting the pores of the skin so as to impede circulation. When an animal happens to shed its covering whether of hair, wool or feathers, at such inclement seasons, the effect on its general health is highly injurious. The excessive heats of summer, by expanding all the parts of the animal frame occasion a degree of lassitude, and want of energy even in the stomach and intestines, and while the animal eats and digests less food than usual, a greater waste than usual takes place by perspiration. Nature has provided trees, rocks, caverns, hills and waters, to moderate these extremes of heat and weather, and man imitates them by hovels, sheds, and other buildings, according to particular circumstances.

Good air and water may seem unnecessary to insist on; but cattle and horses, and even poultry, pent up in close buildings, where there are no facilities for a change of the atmosphere, often suffer on this account. A slight degree of fever is produced at first, and after a time, when the habit of the animal becomes reconciled to such a state, a retarded circulation, and general decay or diminution of the vital energies takes place.

COWS AND CALVES.

Where butter is the principal object, such cows should be chosen as are known to afford the best and largest quantities of milk and cream, of whatever breed they may be. But the quantity of butter to be made from a given number of cows must always depend on a variety of contingent circumstances; such as the size and goodness of the beasts; the kind and quantity of the food; and the distance of time from calving. As to the first, it need hardly be mentioned that a large cow will give greater store of milk than one of smaller size; though cows of equal size differ as to the quantity of cream produced from the milk of each: it is, therefore, in those cows whose milk is not only in large abundance, but which from a peculiar inherent richness yields a thick cream, that the butter dairy-man is to place his chief dependence; and where a cow is deficient in either of these, she should be parted with, and her place supplied by one more proper for this use.

Where cheese is the principal object, the management in respect to the cows must be the same.

When the object is the suckling of calves the farmer should provide himself with a breed of cows suited to the quality of his land Large cattle for rich soil, and consequent plenty of cattle food and *vice versa*. For suckling calves, cows are wanted which give a large *quantity* of milk, the *quality* being considered of less consequence. Indeed it is said that rich milk is not the most proper for calves, as it is apt to clog their stomachs. "A deep milker," says Mr Lawrence, "in the first flush of her milk, will give a sufficient quantity for two or more young small calves, but if circumstances demand that part of the cow's milk be reserved for butter, the last, which is the richest of the milk should be reserved; the thinnest or first milk being sufficiently nourishing for the calf; and if the calves should be suckled three times instead of only twice a day, allowing them still but the same quantity, there is no doubt, but the milk, in a smaller quantity would set much easier on their stomachs, and contribute more to their speedy nutrition: for the chief reason of their almost constant suffering from acidity and crudities subsists in the great load which is at once laid upon the calves' stomachs, after many hours of abstinence and pining. It requires considerable caution at first suckling of calves that their stomachs be not overcharged, in which case, obstruction puts an entire stop to their thriving, and is even fatal, as I have too often experienced; their stomacns must be inured by degrees to quantity of milk, nor should the calves be suffered to suck their fill, till towards the latter part of their time."

"The calve-pens should be in convenient proximity to the cow-stalls, warm for the winter season, since all young animals require warmth, which in fact is a constituent part of their nourishment, and possessing the means of ventilation in the summer. The bottom of the pen should be perforated boards, or at least sloping ones, that the urine may be discharged, and conveyed to the proper reservoir. Where only two or three calves are suckled, it is better to keep them separate, and they will lie quietly by themselves, if suckled three times a day; but when in company they will sometimes get the ill habit of sucking each other. Where many are suckled, there ought not to be more than half a dozen in one pen. Perfect cleanliness and dry straw are necessary and a calf that becomes dirty should be washed clean with soap suds, and well dried; as any filth suffered to adhere to their coats will impede their thriving."

Deane's New England Farmer says, "when calves are designed for veal, they should be taken from the cow the next day after they are calved. Let them suck only two teats during the first week; three during the second, and let them have the whole of them during the third and fourth weeks; and then kill them. If they have all the milk at first, they will grow so fast that they will soon need more than all. The natural consequences is, that they will grow lean, and not be fit for veal. Many kill them at three weeks old; but the veal is not commonly so good, and the skins of calves so young are but of little value.

"When calves are to be reared, some permit them to run with, or at least to suck the cow during the first season, and it is a prevalent opinion that they are improved by it. It is, however, certain that the best raisers of valuable stock in England and even here do not concur in this sentiment. Experience has shown that the finest possible animals have been raised in great numbers, without taking any milk from the cow after three days. They may go with the cow the first three or four days. They should have milk more or less for about twelve weeks. They may be fed with skimmed milk, or water porridge, after the first fortnight; or hay tea may be mixed with their milk; or their milk may be mixed with meal and water. After a calf has sucked or drank milk for the space of a month, take some of the freshest and sweetest hay, and put little wisps of it into some cleft sticks, stuck up in such a manner that he can easily come at them, and he will soon learn to eat.

"If skim milk is given to calves, it should be boiled and suffered to stand till it cools to the temperature of that first given by the cow. It is better boiled than when warmed only. If the milk be given too cold it will cause the calf to purge. If this is the case, put two or three spoonfuls of runnet in the milk and it will stop the looseness. If the calf is bound, pork broth is said to be a safe thing to put into their milk.

"It is not true that calves are best weaned on grass: and the reason assigned is both unfounded and absurd, viz. that when raised on hay, they become big bellied. They do not in fact become so. They are much more docile when raised in the barn, thrive much faster and are as lively; and even if their bellies did grow larger we are yet to learn that such a circumstance would be a blemish in a milch cow. It is thought by many to be an excellent mark."

The following mode of raising calves is practised by the religious society denominated Shakers, at Canterbury, N. H. It is extracted from a communication from Mr Winckley, received by favour of Mr Bartlett, of Warner, N. H. and published in the New England Farmer, vol. ii. page 305. We republish it because the method adopted appears to us to be judicious, and may be new, in some of its details, to many of our recent subscribers.

"We let calves that came in the fore part of March, suck about a week or ten days, then take them from the cow, giving them a moderate allow-

ance of new milk to drink till they have learnt to drink it freely; then put in some skimmed milk; and we feed them wholly on skimmed milk, taking care to give it at about the temperature of milk directly taken from the cow; by heating a part of it, and mixing it with the rest. Care should be taken not to scald the milk when heated; also not to give them any sour milk, for this will make them scour. The trough or vessel in which they drink their milk, should be kept clean and not suffered to get sour.

"We let the milk stand about 12 hours, before it is skimmed; giving a calf at first about four quarts night and morning; increasing the mess as need requires, till he is six weeks old, from which time till ten weeks old, he will require perhaps about twelve quarts per day.

"When about ten weeks old, we begin to diminish the quantity of milk for about the space of two or three weeks, at which time we wean them — During the whole process from two to fourteen weeks old, calves should be well supplied with good hay, salt and provender; such as oats, wheat bran, and oil-cake ground fine; they should also be supplied with scurf or dirt (though scurf is the best) which is a preventive against scouring

"The particular advantages to be derived from the above method of treatment are the following:

"1. It is much cheaper than to let them suck in the ordinary way; whereas it makes a great saving of cream for butter, and that without injuring the calves, if they are properly attended to.

2. It prevents calves from moaning, or pining so much while weaning, as they would otherwise do, when taken from the cows.

"3. It not only prevents the cows being injured in consequence of the calves biting the teats; but also prevents their holding back their milk from the milker, which often serves to diminish the milk afterwards. The only disadvantage to be found in the above method of treatment is that it requires some more labour to feed them, where they thrive equally well in every respect, as those do which are permitted to suck in the ordinary way."

Rapid Growth of the Plane Tree, or Button Wood.—Samuel W. Pomeroy, Esq. has sent to the office of the New England Farmer, a block, cut from a sprout of a stump of Button wood, which is 17½ inches in circumference, and was part of a trunk or stem 32½ feet high. The same stump produced 10 more sprouts of nearly the same dimensions, all the growth of nine years!

LUCERNE, *Medicago Sativa.*

By some experiments made by the Hon. *Robert R. Livingston*, recorded in the *Transactions of the Agricultural Society of New York*, it appears that with good cultivation, and abundant manuring, from six to nine tons of hay may be obtained from an acre of this grass in a season. The ground must be highly pulverized to insure a good crop. Twenty pounds of seed are required for an acre if sown in broadcast, six pounds if drilled. It answers very well with red clover, and is not injured by the cold or the changes of our climate.

Mr L. advises as the result of his experiments, 1. Never to sow on ground that is not perfectly pulverized. 2. Not to sow till the ground has acquired a degree of warmth friendly to vegetation, viz. in May. 3. To sow with no crop that will probably lodge. 4. If sown with buck-wheat, to apply no gypsum or other manure, till the buck-wheat is off. 5. When the quantity sown is small, and the farmer can afford to lose a crop, to give the ground one turn in the autumn, another in April, harrowing fine, and a third the begining of May, and then if the weather be mild and warm, sow if the ground be in perfect tilth, otherwise give it another ploughing.

When lucerne turns yellow it should be mowed, and the plants will come up free from the disorder. [Deane's New England Farmer.]

VINEGAR.

The method of making this liquid out of cider, wine, &c. is too generally known to need any description; but it is not so generally known that a very sharp vinegar may also be made out of whey. The method of making it, as described by Mr. *Genet*, is very simple.

'After having clarified the whey, it is poured into casks with some aromatic plants, or elder-blossoms, as suits the fancy, and exposed in open air to the sun, where it soon acquires an uncommon degree of acidity.'

Vinegar may also be made from the juice of elder berries, mixed with a suitable proportion of water, and exposed to the sun, as before mentioned. It may also be made from the juice of the black-birch or of the maple, when either is boiled down sufficiently; or from the juice of beets, carrots, turnips, potatoes, &c. when boiled and the juice pressed out and exposed in like manner.

[Farmer's Assistant.]

Kenrick Nursery.

FRUIT AND FOREST TREES for sale as usual near the Brighton Post Office.—The Nursery contains a good variety of English Cherry Trees; and of Pear trees, from which gentlemen who seasonably apply can obtain samples of several of Mr Knight's new sorts, so highly recommended in the Agricultural Journal. Also many thousands of budded apple trees of superior kinds, good size, and allowed by all to be very thrifty and handsome. Several thousands of budded Peach trees consisting of a choice collection of about 40 of the best sorts discovered in gardens or the market; the peach trees are from 5 to 8 feet high, and the buyer has his choice at 30 cents each; there are likewise plenty of Apricots and Nectarines.

Of good sized Ornamental trees, the Flowering Catalpas, and Horse Chesnut—the Mountain Ash—Weeping Willow—Silver Fir—Larch—Sugar maple—Butternut, &c. Currant bushes,—the common red of all sizes, by the dozen hundred, or thousand, on moderate terms.—Also the large Dutch White, and Red;—the Champaine and the Black.—Red, White and Damask Rose bushes.—Senna, Gum Acacia, English grapes,—Red and White Antwerp Raspberries, &c.

This Nursery, within six miles of Boston and so easily viewed stands in no need of that incessant praise, the interested and artful lavish on some distant Nurseries, which they well know are located in a wrong direction for supplying people in these Northern States. For it is an established maxim, of which they cannot be ignorant, that trees of rapid growth ought not to be robbed of their roots in the fashionable way and removed from a mild to a colder situation,—but the reverse. However, Yankee sagacity is not easily outwitted, hence experienced Agriculturists as far south as Rhode Island, give a decided preference to trees from Northern Nurseries.

Orders addressed to J. & W. Kenrick, and sent to the Brighton post office, or left at the office of Dana & Fenno in State Street, will be duly attended to; and trees will be packed in clay and matts for shipping when ordered, but distant gentlemen should always employ some agent to receive and pay for them. On Saturdays, packed trees will be delivered in Boston free of charge for conveyance.

In transplanting, one year's growth is frequently lost, if the trees happen to survive, by an unreasonable diminution of the roots, therefore special care shall be taken for their preservation. tf. March 9.

Further supply of Seeds.

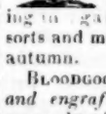
Just received at the Farmer office and Agricultural Establishment, No 52 North Market street, Boston,

24 bushels early seedling Peas, various kinds
6 " Canary seed,
1 " Rape seed,
1 " Hemp seed,
6 " Early Potatoes,
Early Yellow six weeks Beans
Dun coloured ditto
Warrington Dwarf ditto
Refugee or Thousand fold ditto
White Cluster Dwarf ditto
White Kidney ditto.
Silver Skin union
20 lbs. White "
50 lbs. Red "
Potato "
1 barrel of sweet Carolina Potato slips.

For sale, wholesale and retail. March 2.

JAMES BLOODGOOD & Co's

Nursery at Flushing, on Long Island, near New York.



IN behalf of the proprietors of the above nursery, the subscriber solicits the orders of horticulturists who may be desirous of stocking their gardens and fields with fruit trees of the finest sorts and most healthy and vigorous stocks the present autumn.

BLOODGOOD & Co. *attend personally to the inoculating and engrafting of all their fruit trees*, and purchasers may rely with confidence that the trees they order will prove genuine.

The subscriber, agent of the above nursery, will receive orders for any quantity of

FRUIT AND FOREST TREES,
FLOWERING SHRUBS,
AND
PLANTS.

And the trees will be delivered in this city at the risk and expense of the Purchaser; the bills may be paid to him.

The reputation of this nursery is so extensively known and has been so well sustained that I take leave to refer those in want of trees to any of the Horticulturists in this city and its vicinity, and if ocular demonstration is desired, I invite those who wish to be thus satisfied to examine the trees in my garden at Dorchester procured from this nursery for three or four years past, some of which are now in bearing, all in a healthy and vigorous state.

Catalogues will be delivered gratis on application to ZEB. COOK Jr.
Rogers' Building—Congress Street.

Notice to Gentlemen Farmers.

FOR SALE, the very valuable farm of the late James Gilchrist, Esq. situated in Charlestown, N. H. on the lower meadows, so called, of the Connecticut river, and formerly belonged to Col. Asabel Hunt.

This Farm consists of 385 acres of Land, of which 70 are meadow, of the first quality, and in a state of high cultivation; the remaining 315 are upland, and consist chiefly of pasture and woodland; the whole making one entire piece. The House is large and commodious, well furnished with all needful and convenient out buildings, and in excellent repair.

It is beautifully situated, between the great river road and the bank of the Connecticut, on a swell of land rising out of the meadow.

The barns are large and numerous, conveniently placed, and have been thoroughly repaired within three years. One *large* barn has been *built* within that time.

Persons wishing to purchase such a place, are invited to look at this.—Terms and further particulars may be known on application to Mrs SUSAN GILCHRIST, on the premises, or to S. G WILLIAMS & CO. Boston.

Barley.

2250 Bushels of Barley, of a superior quality, for seed, and in lots to suit purchasers.—Now landing from Brig Sultana from Smyrna, and for sale by EBENEZER BREED, No 6½ Dock Square. March 9.

MISCELLANIES.

MAN AND WOMAN.

MAN is the rugged lofty pine,
That frowns on many a wave-beat shore;
Woman 's the slender graceful vine,
Whose curling tendrils round it twine,
And deck its rough bark sweetly o'er.

Man is the rock whose towering crest
Nods o'er the mountain's barren side;
Woman 's the soft and mossy vest,
That loves to clasp its sterile breast,
And wreath its brow in verdant pride.

Man is the cloud of coming storm,
Dark as the raven's murky plume;
Save where the sun-beam light and warm,
Of woman's soul, and woman's form,
Gleams brightly o'er the gathering gloom.

Extract from Carter's Letters from Europe.

Agriculture of Lucca.—The fields on either hand are so many gardens, every foot of which is manured and cultivated to the highest degree, by an overstocked population. Not a tendril of the vine, not a plant nor a blade of corn is suffered to be out of its place, or to occupy more ground than is just sufficient for its support. The peasantry of both sexes are always in the fields, sometimes apparently only to watch the growth of plants under their charge, which they feed and nurse with more care than they do their children. They mix manure with water in casks, forming a sort of nutricious pap, which they ladle out daily in exact proportions, for the food of vegetables. To the American farmer, who is lord of his hundred or his thousand acres, this exactness might seem piddling business, but here it is absolutely necessary, that every rood should maintain its man. It would take but few such farms, such as are found in the interior of New York, to cover the whole Duchy of Lucca, which contains only 320 square miles, more than half of which consists of barren mountains, incapable of tillage. Yet this territory has a population of 120,000, who depend chiefly on the cultivation of the soil for support. The richness of the landscape bears ample testimony to their honest industry, and to the utmost nicety in the mode of culture. Females who never saw festoons of silk or damask are engaged in adjusting festoons of vines, stretching from tree to tree in waving and graceful wreaths.

Winter in Siberia.—Mr. Ledyard, a native of Connecticut, who traversed some of the dreary regions of Russia, in a letter to Dr. Ledyard of Long Island, wrote as follows;

"You have no idea of the excessive cold in the region of Siberia. By experiments that I made at Yakutsky, I found on the 19th of November the Mercury in my thermometer froze. In December, I found by repeated observations, that two ounces of clear quicksilver openly exposed, froze hard in fifteen minutes. I observed that in these severe frosts the air was condensed, as it is with you in a thick fog—the atmosphere is frozen—respiration is fatiguing, &c. It is a happy law of nature, that in such intense cold there is seldom any wind—when there is it is dangerous to be abroad.

"There are no wells at Yakutsky; for it is found by experiment that the water freezes at sixty feet deep. People of these regions are therefore obliged to use ice and snow. They have also ice windows, glass is of no use to the few who have it; the difference in the state of the air, within and without, is so great that the glass is covered on the inside with several inches of frost, and in that situation it is less luminous than ice. The timber of the houses splits and opens with loud cracks—the rivers thunder and open with broad fissures—all nature groans beneath the rigours of winter."

It is told of the late Earl of Strathmore that he was suddenly awakened at night in his carriage, by a highwayman, who, ramming a pistol through the window, and presenting it close to his breast, demanded his money, exclaiming at the same time that he had heard that his Lordship had boasted that he would never be robbed by a single highwayman, but that he should now be taught the contrary.—His Lordship putting his hand into his pocket, replied—"Neither would I now be robbed, if it were not for that fellow who is looking over your shoulders." The highwayman turned round his head, when his Lordship, who had drawn a pistol from his pocket, instead of a purse, shot him on the spot.

Mind.—No state can be more destitute than that of a person who, when the delights of sense forsake him, has no pleasures of the mind.—*Burg.*

Social Intercourse.—From social intercourse are derived some of the highest enjoyments of life; where there is a free interchange of sentiments the mind acquires new ideas, and by a frequent exercise of its powers, the understanding gains fresh vigor.—*Addison.*

Spirits.—It is a Spanish maxim, that he who loseth wealth loseth much; he who loseth a friend loseth more; but he that loseth his spirits loseth all.

Time.—Much may be done in those little shreds and patches of time, which every day produces, and which most men throw away, but which nevertheless will make at the end of it no small deduction from the life of man. Cicero has termed them *intercessiva tempora*, and the ancients were not ignorant of their value; nay, it was not unusual with them either to compose or to dictate while under the operation of rubbing after the bath.

Trouble not yourself with wishing that things may be just as you would have them, but be well pleased they should be just as they are, and then you will live easy.—*Epictetus.*

Written at the End of his Bible by Sir William Jones.—The scriptures contain, independently of a divine origin, more true sublimity, more exquisite beauty, pure morality, more important history, and finer strains both of poetry and eloquence, than can be collected within the same compass from all other books that were ever composed in any age or in any idiom. The two parts of which the scriptures consist are connected by a chain of compositions which bear no resemblance in form of style to any that can be produced from the stores of Grecian, Indian, Persian, or even Arabian learning. The antiquity of these compositions no man doubts; and the unrestrained application of them to events long subsequent to their publication, is a solid ground of belief, that they were genuine predictions, and consequently inspired.

Never write a letter when in a passion.

Linnæan Botanic Garden and Nursery.

The subscribers give notice that they have been appointed sole agents for this vicinity, for the Linnæan Botanic Garden and Nursery, at Flushing, Long Island. This Nursery is well known, and contains the most extensive collection of Fruits, Ornamental Trees, and Plants in America. The Fruits have been selected by actual investigation of their merits, and nearly all of which are engrafted from bearing trees.

In the selection, which has been the particular pursuit of Mr PRINCE and his father for more than half a century, he has spared neither pains nor expense, and such as did not possess particular merit have been rejected and their accuracy has been tested by the best authors of the age.

In the present catalogue he offers above 500 new varieties of Fruits not to be found in any other collection, in America, and which include the most celebrated kinds that have within a few years past been brought into notice and recommended by those distinguished Horticulturalists, Van Mons & Duquesene, and by Mr Knight, President of the Horticultural Society of London.

In regard to the character and accuracy of the Fruits sent from this establishment, the proprietor refers to the Hon. Jonathan Hunewell, and other gentlemen in Boston and its vicinity, who have patronized his establishment for the last fifty years, and particularly to the fruit of the various kinds with which the Boston market is now supplied from the extensive collection of trees furnished the late Dr Oliver Smith, Secretary of the Massachusetts Agricultural Society, who, more than thirty years since, had several thousand trees annually, which were distributed among the members of that Association. It may perhaps be deemed worthy of notice that near 100 varieties of the fruits offered for sale, by the proprietor, are different from those cultivated by other establishments under the same names, and the identity of every fruit sent by him, the proprietors expressly guarantees.

☞We are authorized and requested by Mr PRINCE to say, that the allusion in another advertisement, to nurseries whose trees have their roots trimmed off too much, can have no reference to trees sent from this nursery.

Catalogues may be obtained gratis of the subscribers, and orders left at the New England Farmer office and Agricultural Establishment, No. 52 North Market street, (if from a distance, post paid) will meet prompt attention.

JOS. R. NEWELL,
JOHN B. RUSSELL.

TO FARMERS—To let, a farm containing 35 acres of land, a large and comfortable house, barn, &c. The land is of good quality, and of easy cultivation. There are on the place a variety of choice young fruit trees, which are just beginning to bear; also 10 acres of peat meadow, on which could be cut enough fuel for the family, and is an excellent manure. Said farm is situated in Cambridge, about 4 miles from Boston market. The terms will be on a lease from six to ten years, the first year's rent to be expended for manure, and a part afterwards to be laid out in the same manner every year.—The above offers a desirable opportunity to an intelligent, thorough and enterprising farmer. No one but who can bring recommendations as being such need apply. THOMAS BREWER, 416 Washington str't.

Memoirs of the P. A. S.

JUST received and for sale by Hilliard, Gray & Co. No 134 Washington street, a new supply of the Memoirs of the Pennsylvania Agricultural Society, with selections from the most approved authors, adapted to the use of the practical farmers of the United States.

☞Published every Friday at Three Dollars per annum, payable at the end of the year—but those who pay within sixty days from the time of subscribing are entitled to a deduction of Fifty Cents.

Gentlemen who procure *five* responsible subscribers, are entitled to a *sixth* volume gratis.

New subscribers can be furnished with the preceding numbers of the current volume.